

Please print or type in the unshaded areas only.

VA0025020

United States Environmental Protection Agency
Washington, DC 20460

APPROVAL-EXPIRES

Form

2F

NPDES



Application for Permit To Discharge Stormwater Discharges Associated with Industrial Activity

Paperwork Reduction Act Notice

Public reporting burden for this application is estimated to average 28.6 hours per application, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate, any other aspect of this collection of information, or suggestions for improving this form, including suggestions which may increase or reduce this burden to: Chief, Information Policy Branch, PM-223, U.S. Environmental Protection Agency, 1200 Pennsylvania Avenue, NW, DC 20460, or Director, Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503.

I. Outfall Location

For each outfall, list the latitude and longitude of its location to the nearest 15 seconds and the name of the receiving water.

A. Outfall Number (list)	B. Latitude			C. Longitude			D. Receiving Water (name)
007*	37°	15'	59"	79°	54'	18"	Roanoke River
008	37°	16'	00"	79°	54'	11"	Roanoke River
009	37°	16'	00"	79°	54'	08"	Roanoke River

*Location of Outfall 007 was changed as a result of the WPCP improvement project; new designation may be required

II. Improvements

A. Are you now required by any Federal, State, or local authority to meet any implementation schedule for the construction, upgrading or operation of wastewater treatment equipment or practices or any other environmental programs which may affect the discharges described in this application? This includes, but is not limited to, permit conditions, administrative or enforcement orders, enforcement compliance schedule letters, stipulations, court orders, and grant or loan conditions. **None**

[illegible]

B. You may attach additional sheets describing any additional water pollution (or other environmental) projects which may affect your discharges) you now have under way or which you plan. Indicate whether each program is now under way or planned, and indicate your actual or planned schedules for construction.

III. Site Drainage Map

Attach a site map showing topography (or indicating the outline of drainage areas served by the outfall(s) covered in the application if a topographic map is unavailable) depicting the facility including: each of its intake and discharge structures; the drainage area of each storm water outfall; paved areas and buildings within the drainage area of each storm water outfall, each known past or present areas used for outdoor storage or disposal of significant materials, each existing structural control measure to reduce pollutants in storm water runoff, materials loading and access areas, areas where pesticides, herbicides, soil conditioners and fertilizers are applied; each of its hazardous waste treatment, storage or disposal units (including each area not required to have a RCRA permit which is used for accumulating hazardous waste under 40 CFR 262.34); each well where fluids from the facility are injected underground; springs, and other surface water bodies which receive storm water discharges from the facility.

See Attached Site Map & Storm Water Drainage Map.

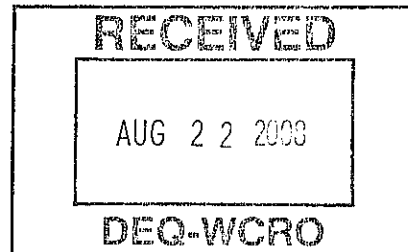
IV. Narrative Description of Pollutant Sources

A. For each outfall, provide an estimate of the area (include units) of impervious surfaces (including paved areas and building roofs) drained to the outfall, and an estimate of the total surface area drained by the outfall.

Outfall Number	Area of Impervious Surface (provide units)	Total Area Drained (provide units)	Outfall Number	Area of Impervious Surface (provide units)	Total Area Drained (provide units)
007	2.3 acres	3.2 acres	008	1.5 acres	3.9 acres
			009	4.9 acres	11.2 acres

B. Provide a narrative description of significant materials that are currently or in the past three years have been treated, stored or disposed in a manner to allow exposure to storm water; method of treatment, storage, or disposal; past and present materials management practices employed, in the last three years, to minimize contact by these materials with storm water runoff; materials loading and access areas; and the location, manner, and frequency in which pesticides, herbicides, soil conditioners, and fertilizers are applied.

See Attachment IV B



C. For each outfall, provide the location and a description of existing structural and nonstructural control measures to reduce pollutants in storm water runoff; and a description of the treatment the storm water receives, including the schedule and type of maintenance for control and treatment measures and the ultimate disposal of any solid or fluid wastes other than by discharge.

Outfall Number	Treatment	List Codes from Table 2F-1
	See Attachment IV C	

V. Nonstormwater Discharges

A. I certify under penalty of law that the outfall(s) covered by this application have been tested or evaluated for the presence of nonstormwater discharges, and that all nonstormwater discharges from these outfall(s) are identified in either an accompanying Form 2C or Form 2E application for the outfall.

Name and Official Title (type or print)	Signature	Date Signed
Michael McEvoy, Executive Director, Wastewater Services	Michael J. McEvoy	8/20/08

B. Provide a description of the method used, the date of any testing, and the onsite drainage points that were directly observed during a test

The outfalls and associated conveyance systems were observed during dry weather conditions by Olver Incorporated and Western Virginia Water Authority staff on April 7, 2008 and no flows were observed.

VI. Significant Leaks or Spills

Provide existing information regarding the history of significant leaks or spills of toxic or hazardous pollutants at the facility in the last three years, including the approximate date and location of the spill or leak, and the type and amount of material released.

None

VA0025020

Continued from Page 2

VII. Discharge Information

A, B, C, & D: See instructions before proceeding. Complete one set of tables for each outfall. Annotate the outfall number in the space provided. Tables VII-A, VII-B, and VII-C are included on separate sheets numbered VII-1 and VII-2.

E. Potential discharges not covered by analysis-is any pollutant listed in Table 2F-2, 2F-3, or 2F-4, a substance or a component of a substance which you currently use or manufacture as an intermediate or final product or byproduct?

☐ Yes (list all such pollutants below)☒ No (go to section VIII)

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VIII. Biological Toxicity Testing Data

Do you have any knowledge or reason to believe that any biological test for acute or chronic toxicity has been made on any of your discharges or on a receiving water in relation to your discharge within the last 3 years?

☐ Yes (list results below)☒ No (go to Section IX)

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IX. Contract Analysis Information

Were any of the analyses reported in Item VII performed by a contract laboratory or consulting firm?

☒ Yes (list the name, address, and telephone number of, and pollutants analyzed by, each such laboratory or firm below)☐ No (go to Section X)

A. Name	B. Address	C. Area Code & Phone No.	D. Pollutants Analyzed
REI Consultants	225 Industrial Park Drive Beaver, WV 25813	(304) 255-2500	All reported parameters.

X. Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

A. Name & Official Title (type or print)

Michael McEvoy, Executive Director, Wastewater Services

B. Area Code and Phone No.

(540) 853-1449

C. Signature



D. Date Signed

8/23/08

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Form Approved.
OMB No. 2040-0086.
Approval expires 8-31-98.

VII. Discharge Information (Continued from page 3 of Form 2F)

Part A- You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

Pollutant and CAS Number (if available)	Maximum Values (Include units)		Average Values (Include units)		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 30 Minutes	Flow-weighted Composite	Grab Sample Taken During First 30 Minutes	Flow-weighted Composite		
Oil and Grease	<5.0 mg/L	NA	<5.0 mg/L	NA	1	Surface Runoff
Biological Oxygen Demand (BOD5)	29 mg/L	4 mg/L	29 mg/L	4 mg/L	1	Surface Runoff
Chemical Oxygen Demand (COD)	30 mg/L	28 mg/L	30 mg/L	28 mg/L	1	Surface Runoff
Total Suspended Solids (TSS)	16 mg/L	18 mg/L	16 mg/L	18 mg/L	1	Surface Runoff
Total Kjeldahl Nitrogen	1.4 mg/L	<1.0 mg/L	1.4 mg/L	<1.0 mg/L	1	Surface Runoff
Nitrate plus Nitrite Nitrogen	1.02 mg/L	0.76 mg/L	1.02 mg/L	0.76 mg/L	1	Surface Runoff
Total Phosphorus	0.40 mg/L	0.32 mg/L	0.40 mg/L	0.32 mg/L	1	Surface Runoff
pH	Minimum 7.51 S.U.	Maximum 7.51 S.U.	Minimum 7.51 S.U.	Maximum 7.51 S.U.	1	Surface Runoff

Part B- List each pollutant that is limited in an effluent guideline which the facility is subject to or any pollutant listed in the facility's NPDES permit for its process wastewater (if the facility is operating under an existing NPDES permit). Complete one:

[illegible]

Continued from the Front

Part C- List each pollutant shown in Tables 2F-2, 2F-3, and 2F-4 that you know or have reason to believe is present. See the instructions for additional details and requirements. Complete one table for each outfall.

[illegible]

Part D- Provide data for the storm event(s) which resulted in the maximum values for the flow weighted composite sample.

1. Date of Storm Event	2. Duration of Storm (in minutes)	3. Total rainfall during storm event (in inches)	4. Number of hours between beginning of storm measured and end of previous measurable rain event	5. Maximum flow rate during rain event (gallons/minute or specify units)	6. Total flow from rain event (gallons or specify units)	7. Season sample was taken	8. Form of Precipitation (rainfall, snowmelt)
9/10/2008	420 minutes	0.12 inches	>72 hours	3 gallons/minute	1,260 gallons	Summer	Rainfall

9. Provide a description of the method of flow measurement or estimate

The flow was determined by estimating the time it took to fill a one-gallon bucket.

VII. Discharge Information (Continued from page 3 of Form 2F)

Part A- You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each point. See instructions for additional details.

Pollutant and CAS Number (if available)	Maximum Values (include units)		Average Values (include units)		Number of Storm Events Sampled	Location
	Grab Sample Taken During First 30 Minutes	Flow-weighted Composite	Grab Sample Taken During First 30 Minutes	Flow-weighted Composite		
Oil and Grease	<5.0 mg/L	NA	<5.0 mg/L	NA	1	Surface Runoff
Biological Oxygen Demand (BOD5)	32 mg/L	4 mg/L	32 mg/L	4 mg/L	1	Surface Runoff
Chemical Oxygen Demand (COD)	202 mg/L	33 mg/L	202 mg/L	33 mg/L	1	Surface Runoff
Total Suspended Solids (TSS)	78 mg/L	52 mg/L	78 mg/L	52 mg/L	1	Surface Runoff
Total Kjeldahl Nitrogen	3.8 mg/L	1.0 mg/L	3.8 mg/L	1.0 mg/L	1	Surface Runoff
Nitrate plus Nitrite Nitrogen	0.63 mg/L	0.30 mg/L	0.63 mg/L	0.30 mg/L	1	Surface Runoff
Total Phosphorus	0.84 mg/L	0.37 mg/L	0.84 mg/L	0.37 mg/L	1	Surface Runoff
pH	Minimum 7.48 S.U.	Maximum 7.48 S.U.	Minimum 7.48 S.U.	Maximum 7.48 S.U.	1	Surface Runoff

Part 8. List each pollutant that is limited in an effluent guideline which the facility is subject to or any pollutant listed in the facility's NPDES permit for its process wastewater (if the facility is operating under an existing NPDES permit). Complete one table for each outfall. See the instructions for additional details and requirements.

[illegible]

Continued from the Front

Part C- List each pollutant shown in Tables 2F-2, 2F-3, and 2F-4 that you know or have reason to believe is present. See the instructions for additional details and requirements. Complete one table for each outfall.

[illegible]

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Part D- Provide data for the storm event(s) which resulted in the maximum values for the flow weighted composite sample.

1. Date of Storm Event	2. Duration of Storm (in minutes)	3. Total rainfall during storm event (in inches)	4. Number of hours between beginning of storm measured and end of previous measurable rain event	5. Maximum flow rate during rain event (gallons/minute or specify units)	6. Total flow from rain event (gallons or specify units)	7. Season sample was taken	8. Form of Precipitation (rainfall, snowmelt)
8/26/2008	720 minutes	2.00 inches	>72 hours	56 gallons/minute	40,320 gallons	Summer	Rainfall

9. Provide a description of the method of flow measurement or estimate

The flow was determined by estimating the time it took to fill a one-gallon bucket.

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Form Approved.

OMB No. 2040-0086.

Approval expires 3-31-98.

VII. Discharge Information (Continued from page 3 of Form 2F)

Part A- You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

Pollutant and CAS Number (if available)	Maximum Values (include units)		Average Values (include units)		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 30 Minutes	Flow-weighted Composite	Grab Sample Taken During First 30 Minutes	Flow-weighted Composite		
Oil and Grease	<5.0 mg/L	NA	<5.0 mg/L	NA	1	Surface Runoff
Biological Oxygen Demand (BOD5)	<2.0 mg/L	<2.0 mg/L	<2.0 mg/L	<2.0 mg/L	1	Surface Runoff
Chemical Oxygen Demand (COD)	73 mg/L	56 mg/L	73 mg/L	56 mg/L	1	Surface Runoff
Total Suspended Solids (TSS)	13 mg/L	12 mg/L	13 mg/L	12 mg/L	1	Surface Runoff
Total Kjeldahl Nitrogen	2.7 mg/L	2.0 mg/L	2.7 mg/L	2.0 mg/L	1	Surface Runoff
Nitrate plus Nitrite Nitrogen	1.39 mg/L	0.57 mg/L	1.39 mg/L	0.57 mg/L	1	Surface Runoff
Total Phosphorus	0.44 mg/L	0.34 mg/L	0.44 mg/L	0.34 mg/L	1	Surface Runoff
pH*	Minimum 7.88 S.U.	Maximum 7.68 S.U.	Minimum 7.68 S.U.	Maximum 7.68 S.U.	1	Surface Runoff

Part B- List each pollutant that is limited in an effluent guideline which the facility is subject to or any pollutant listed in the facility's NPDES permit for its process wastewater (if the facility is operating under and existing NPDES permit). Complete one t

Pollutant and CAS Number (if available)	Maximum Values (include units)		Average Values (include units)		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 30 Minutes	Flow-weighted Composite	Grab Sample Taken During First 30 Minutes	Flow-weighted Composite		
E. coli	>32,000 col/100 mL	NA	>32,000 col/100 mL	NA	1	Surface Runoff
Total Cyanide	<0.020 mg/L	NA	<0.020 mg/L	NA	1	Surface Runoff
Total Recoverable Nickel	<0.01 mg/L	<0.01 mg/L	<0.01 mg/L	<0.01 mg/L	1	Surface Runoff
Dissolved Hexavalent Chromium	<0.01 mg/L	<0.01 mg/L	<0.01 mg/L	<0.01 mg/L	1	Surface Runoff
Total Recoverable Mercury	<0.001 mg/L	<0.001 mg/L	<0.001 mg/L	<0.001 mg/L	1	Surface Runoff
Total Recoverable Selenium	<0.005 mg/L	<0.005 mg/L	<0.005 mg/L	<0.005 mg/L	1	Surface Runoff
Total Residual Chlorine*	0.15 mg/L**	NA	0.15 mg/L**	NA	1	Surface Runoff

*pH and Total Residual Chlorine Data were collected for Outfall 009 on 8/26/2008 during the same storm event as Outfall 008 was sampled.

** Analytical Interference suspected.

Continued from the Front

Part C- List each pollutant shown in Tables 2F-2, 2F-3, and 2F-4 that you know or have reason to believe is present. See the instructions for additional details and requirements. Complete one table for each outfall.

[illegible]

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Part D- Provide data for the storm event(s) which resulted in the maximum values for the flow weighted composite sample.

1. Date of Storm Event	2. Duration of Storm (in minutes)	3. Total rainfall during storm event (in inches)	4. Number of hours between beginning of storm measured and end of previous measurable	5. Maximum flow rate during rain event (gallons/minute or specify units)	6. Total flow from rain event (gallons or specify units)	7. Season sample was taken	8. Form of Precipitation (rainfall, snowmelt)
05/28/08	143 minutes	0.3 inches	> 72 hours	33 gallons/minute	4,719 gallons	Spring	Rainfall

9. Provide a description of the method of flow measurement or estimate

The flow was determined by estimating the time it took to fill a one-gallon bucket.



WESTERN VIRGINIA
WATER AUTHORITY

WASTEWATER DIVISION

September 10, 2008

Janis Richardson
Western Virginia Water Authority
Water Pollution Control Plant
1502 Brownlee Avenue, SE
Roanoke, VA 24014

Sample Description

Stormwater Outfall 008

Collection Date & Time: 08/26/08; 06:44 PM
Collected by: JR
Received in Lab: 08/27/06; 06:30 AM

Sample Results

Analysis: *Escherichia coli*
Result: 54 N/100ml
Date & Time Analyzed: 08/27/08; 07:46 AM
Analyst: RS
Method: IDEXX Colilert with Quanti-Tray 2000
Reference: IDEXX Colilert Instruction Sheet

Note: Sample was collected after normal lab hours and was not received until 08/27/08. It was set up outside of the holding time for wastewater samples. Sample was kept at <6° C from time of collection until time of preparation.

Certified by:

A handwritten signature in cursive script, reading "Lisa Workman".

Lisa Workman
Laboratory Supervisor

Western Virginia Water Authority

Water Pollution Control Plant
Storm Water Sample Collection Notes

Date of last rain event (0.1" or greater): 7/2/08 Hours since last rain event (0.1" or greater):

Date: 7.10.08 Storm Start Time: 10:15 Storm End Time: 3:15 Quantity of Rain (inches): 0.12"

Total Discharge Volume: 1,260 gallons Maximum Flow Rate: 3 gallons per minute

⁶⁰⁷
OUTFALL 005:

Grab Sample: Time Collected: 11:19 - 11:30

Sampler's Signature: Janis Richardson

Temperature: 26.6 °F Time of Analysis:

Analyst's Signature: Janis Richardson

pH: 7.51 S.U. Time of Analysis:

Analyst's Signature: Janis Richardson

Tot. Res. Cl₂: 0.01 mg/L Time of Analysis:

Analyst's Signature: Janis Richardson

Flow-weighted Composite Sample:

Time: _____	Level: <u>0.01"</u>	Flow: <u>Event</u>	Vol. of Subsample: <u>1,000</u>
Time: _____	Level: <u>0.01"</u>	Flow: <u>Event</u>	Vol. of Subsample: <u>1,000</u>
Time: _____	Level: <u>0.01"</u>	Flow: <u>Event</u>	Vol. of Subsample: <u>1,000</u>
Time: _____	Level: _____	Flow: _____	Vol. of Subsample: _____
Time: _____	Level: _____	Flow: _____	Vol. of Subsample: _____
Time: _____	Level: _____	Flow: _____	Vol. of Subsample: _____
Time: _____	Level: _____	Flow: _____	Vol. of Subsample: _____
Time: _____	Level: _____	Flow: _____	Vol. of Subsample: _____
Time: _____	Level: _____	Flow: _____	Vol. of Subsample: _____
Time: _____	Level: _____	Flow: _____	Vol. of Subsample: _____

Length of composite sample (time): 420 min

TOTAL VOLUME COLLECTED: ~ 3,000 ml

Sampler's Signature: Janis M. Richardson

Comments:



U
R
R

CHAIN OF CUSTODY RECORD NO. 221001

CLIENT: WVWA

CONTACT PERSON: J. Richardson

ADDRESS: 1502 Brownlee Ave

TELEPHONE #: (540) 853-1517

CITY/STATE/ZIP: Prosser, Va 24074

FAX #: (540) 853-1307

BILL TO: Same

E-MAIL ADDRESS: _____

CITY/STATE/ZIP: _____

SITE ID & STATE: _____

PURCHASE ORDER # _____

PROJECT ID: 2003-0001

QUOTE # _____

SAMPLER: 4x Hammer probe

CHAIN OF CUSTODY RECORD NO. 221001

CLIENT: WVWA

CONTACT PERSON: J. Richardson

ADDRESS: 1502 Brownlee Ave

TELEPHONE #: (540) 853-1517

CITY/STATE/ZIP: Prosser, Va 24074

FAX #: (540) 853-1307

BILL TO: Same

E-MAIL ADDRESS: _____

CITY/STATE/ZIP: _____

SITE ID & STATE: _____

PURCHASE ORDER # _____

PROJECT ID: 2003-0001

QUOTE # _____

SAMPLER: 4x Hammer probe

[illegible]



REI Consultants, Inc.
225 Industrial Park Rd.
P.O. Box 286, Beaver, WV 25813
Phone: 304-255-2500 or 800-999-0105
FAX: 304-255-2572
e-mail: rlabs@reiclabs.com

CHAIN OF CUSTODY RECORD NO. 231484

CLIENT: Western Va. Water Authority
ADDRESS: 1502 Brantley Ave, ST
CITY/STATE/ZIP: Roanoke, VA 24014
BILL TO: Sanis Richardson
CITY/STATE/ZIP: _____
PURCHASE ORDER # _____
QUOTE # _____

CONTACT PERSON: Sanis Richardson
TELEPHONE #: (540) 853-1517
FAX #: (540) 853-1307
E-MAIL ADDRESS: _____
SITE ID & STATE: _____
PROJECT ID: _____
SAMPLER: G. Richardson

SAMPLE LOG AND ANALYSIS REQUEST	TURNAROUND TIME REQUIREMENTS		PRESERVATIVES 0 No Preservative 1 Hydrochloric Acid 2 Nitric Acid 3 Sulfuric Acid 4 Sodium Thiosulfate 5 Sodium Hydroxide 6 Zinc Acetate 7 EDTA	NOTE PRESERVATIVES	PRESERVATIVE CODES										COMMENTS	
	REGULAR	*RUSH			1	2	3	4	5	6	7	8	9	10		
SAMPLE ID	NO. & TYPE OF CONTAINERS	SAMPLING DATE / TIME	MATRIX	SAMPLE COMP / GRAB												
SW008	GLASS 2L	8:26:08	SW	Grab												
SW008	1P-500ml	6:130	SW	Grab												
SW008	2L-P	6:141	SW	Grab												
SW008	1L-P	6:140	SW	Grab												
SW008	1L-P	6:137	SW	Grab												
SW008	1P-250	6:143	SW	Grab												
SW008	1P-250	6:146	SW	Grab												
SW008	1P-250	7:12	SW	Grab												
SW008	1P-110	6:144	SW	Grab												
<p>RECEIVED BY: (Signature) <u>Sanis Richardson</u> DATE/TIME: <u>8:50</u></p> <p>RECEIVED BY: (Signature) <u>Sanis Richardson</u> DATE/TIME: <u>8:50</u></p>					<p>RECEIVED BY: (Signature) _____ DATE/TIME: _____</p> <p>RECEIVED BY: (Signature) _____ DATE/TIME: _____</p>										<p>RECEIVED BY: (Signature) _____ DATE/TIME: _____</p> <p>RECEIVED BY: (Signature) _____ DATE/TIME: _____</p>	

Handwritten notes on form:
- "Tested in the lab"
- "Call. Result 6:45 - 6:58 pH 6.59"
- "pH = 7.48"
- "Cl₂ = 0.00"

REI Consultants, Inc.

Analytical Results

Date: 10-Sep-08

CLIENT: WESTERN VA WATER WWTP

WorkOrder: 0808I63

Client Sample ID: SW008 GRAB

Lab ID: 0808I63-02A

Project: STORM WATER

Collection Date: 8/26/2008 6:30:00 PM

Site ID:

Matrix: SURFACE WATER

Analyses	Result Units	Qual	PQL	MCL	Prep Date	Date Analyzed
METALS BY ICP		E200.7			Analyst: BM	
Nickel	0.0062 mg/L		0.0050	NA	08/28/08 10:14 AM	08/28/08 2:23 PM
Selenium	ND mg/L		0.0200	NA	08/28/08 10:14 AM	08/28/08 2:23 PM
MERCURY, TOTAL		E245.1			Analyst: CGW	
Mercury	ND mg/L		0.0010	NA	08/28/08 10:55 AM	09/03/08 11:04 AM
HEXAVALENT CHROMIUM, DISSOLVED		SM3500-CR D			Analyst: JD	
Chromium, Hexavalent	ND mg/L		0.010	NA	08/28/08 10:14 AM	08/27/08 4:53 PM
NOTES: Analyzed by 200.9 for total Chromium within 200.9 hold time. Results verify hexavalent chromium not present at or above the detection limit.						
BOD, 5 DAY, 20°C		SM5210 B			Analyst: JaR	
Biochemical Oxygen Demand	32 mg/L		2	NA	08/28/08 6:32 AM	09/02/08 8:38 AM
CHEMICAL OXYGEN DEMAND		E410.4			Analyst: DSA	
Chemical Oxygen Demand	202 mg/L		10	NA		08/29/08 3:30 PM
CYANIDE		E335.4			Analyst: BA	
Cyanide, Total	ND mg/L		0.020	NA		09/04/08 12:30 PM
ANIONS BY ION CHROMATOGRAPHY		SM4110B			Analyst: SB	
Nitrogen, Nitrate-Nitrite	0.63 mg/L		0.10	NA		09/02/08 7:39 PM
PHOSPHORUS		SM4500-P BE			Analyst: SB	
Phosphorus, Total	0.84 mg/L		0.50	NA		09/04/08 10:45 AM
TOTAL KJELDAHL NITROGEN (TKN)		SM4500-NORGC			Analyst: JL	
Nitrogen, Kjeldahl, Total	3.8 mg/L		1.0	NA		08/28/08 7:00 AM
OIL AND GREASE		E1664			Analyst: JL	
Oil & Grease	ND mg/L		5.0	NA		08/28/08 8:00 AM
TOTAL SUSPENDED SOLIDS		SM2540 D			Analyst: GV	
Total Suspended Solids	78 mg/L		1	NA		08/28/08 7:45 AM

Key: MCL Maximum Contaminant Level

MDL Minimum Detection Limit

NA Not Applicable

ND Not Detected at the PQL or MDL

PQL Practical Quantitation Limit

TIC Tentatively Identified Compound, Estimated Concentration

Qualifiers: B Analyte detected in the associated Method Blank

E Estimated Value above quantitation range

H Holding times for preparation or analysis exceeded

S Spike/Surrogate Recovery outside accepted recovery limit

* Value exceeds Maximum Contaminant Level

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REI Consultants, Inc.

Analytical Results

Date: 10-Sep-08

CLIENT: WESTERN VA WATER WWTP

WorkOrder: 0808163

Client Sample ID: SW008 COMP

Lab ID: 0808163-01A

Project: STORM WATER

Collection Date: 8/27/2008 7:20:00 AM

Site ID:

Matrix: SURFACE WATER

Analyses	Result Units	Qual	PQL	MCL	Prep Date	Date Analyzed
METALS BY ICP		E200.7			Analyst: BM	
Nickel	ND mg/L		0.0050	NA	08/28/08 10:14 AM	08/28/08 2:12 PM
Selenium	ND mg/L		0.0200	NA	08/28/08 10:14 AM	08/28/08 2:12 PM
MERCURY, TOTAL		E245.1			Analyst: CGW	
Mercury	ND mg/L		0.0010	NA	08/28/08 10:55 AM	09/03/08 11:02 AM
HEXAVALENT CHROMIUM, DISSOLVED		SM3500-CR D			Analyst: JD	
Chromium, Hexavalent	ND mg/L		0.010	NA	08/28/08 10:14 AM	08/27/08 4:43 PM
NOTES:						
Analyzed by 200.9 for total Chromium within 200.9 hold time. Results verify hexavalent chromium not present at or above the detection limit.						
BOD, 5 DAY, 20°C		SM5210 B			Analyst: JaR	
Biochemical Oxygen Demand	4 mg/L		2	NA	08/28/08 6:30 AM	09/02/08 8:36 AM
CHEMICAL OXYGEN DEMAND		E410.4			Analyst: DSA	
Chemical Oxygen Demand	33 mg/L		10	NA		08/28/08 12:30 PM
ANIONS BY ION CHROMATOGRAPHY		SM4110B			Analyst: SB	
Nitrogen, Nitrate-Nitrite	0.30 mg/L		0.10	NA		09/02/08 7:39 PM
PHOSPHORUS		SM4500-P BE			Analyst: SB	
Phosphorus, Total	0.37 mg/L		0.25	NA		09/03/08 9:45 AM
TOTAL KJELDAHL NITROGEN (TKN)		SM4500-NORGC			Analyst: JL	
Nitrogen, Kjeldahl, Total	1.0 mg/L		1.0	NA		08/28/08 7:00 AM
TOTAL SUSPENDED SOLIDS		SM2540 D			Analyst: GV	
Total Suspended Solids	52 mg/L		1	250		08/28/08 7:45 AM

Key: MCL Maximum Contaminant Level

MDL Minimum Detection Limit

NA Not Applicable

ND Not Detected at the PQL or MDL

PQL Practical Quantitation Limit

TIC Tentatively Identified Compound, Estimated Concentration

Qualifiers: B Analyte detected in the associated Method Blank

E Estimated Value above quantitation range

H Holding times for preparation or analysis exceeded

S Spike/Surrogate Recovery outside accepted recovery limit

* Value exceeds Maximum Contaminant Level

Page 2 of 3



Improving the environment, one client at a time...

225 Industrial Park Drive
Beaver, WV 25813
TEL: 304.255.2500
FAX: 304.255.2572
Website: www.reiclabs.com

Report Narrative

Project Manager: Joy Mullins

WO#: 0808163
Date: 9/10/2008

CLIENT: WESTERN VA WATER WWTP
Project: STORM WATER

All analyses were performed using documented laboratory SOPs that incorporate appropriate quality control procedures as described in the applicable methods. REI Consultants, Inc. (REIC) technical managers have verified compliance of reported results with the REIC's Quality Program and SOPs, except as noted in this case narrative. Any deviation from compliance is explained below and/or identified within the body of this report by a qualifier footnote which is defined at the bottom of each page.

All samples were analyzed using the methods stated in the analytical report without modification, unless otherwise noted.

All sample results are reported on an "as-received" basis unless otherwise noted.

Results reported for sums of individual parameters, such as Total Trihalomethanes (TTHM) and Total Haloacetic Acids (HAA5), may vary slightly from the sum of the individual parameter results. This apparent anomaly is caused by rounding individual results and summations at reporting, as required by EPA.

Following standard laboratory protocol, sample preservation, such as pH, is verified at time of extraction or analysis based on client requested parameters. Improper preservation is noted on the analytical bench sheet, extraction log, or preservation log and client is notified by close of following business day. All results are reported using preservation compliant samples unless otherwise noted in the analytical report.

The test results in this report meet all NELAP requirements for parameters for which accreditations are required or available. Any exceptions are noted in this report. This report may not be reproduced, except in full, without the written approval of REIC.

In compliance with federal guidelines and standard operating procedures, all reports, including raw data and supporting quality control, will be disposed of after five years unless otherwise arranged by the client via written notification or contract requirement.

If you have any questions please contact the project manager whose name is listed above.



Improving the environment, one client at a time...

225 Industrial Park Drive
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September 10, 2008

JANIS RICHARDSON
WESTERN VA WATER WWTP
1540 UNDERHILL AV
ROANOKE VA 24014

TEL: (540) 853-1517

FAX (540) 853-1307

RE: STORM WATER

Order No.: 0808163

Dear JANIS RICHARDSON:

REI Consultants, Inc. received 2 sample(s) on 8/27/2008 for the analyses presented in the following report.

Please note two changes you may see on your report.

- Results for "Dissolved" parameters will be shown under a separate sample ID, rather than as a separate analysis under the same sample ID. The sample ID for "Dissolved" parameters will include "Field Filtered" or "Lab Filtered", as appropriate.
- Metals results will no longer be identified as "Total" or "Total Recoverable". The methods have not been changed, only their appearance on the report.

If you have any questions regarding these results, please do not hesitate to call.

Sincerely,

Joy Mullins

Project Manager





WESTERN VIRGINIA
WATER AUTHORITY

WASTEWATER DIVISION

September 11, 2008

Janis Richardson
Western Virginia Water Authority
Water Pollution Control Plant
1502 Brownlee Avenue, SE
Roanoke, VA 24014

Sample Description

~~Stormwater Outfall 007~~

Collection Date & Time: 09/10/08; 11:30 AM

Collected by: JR

Received in Lab: 09/10/08; 11:40 AM

Sample Results

Analysis: *Escherichia coli*

Result: 88 N/100ml

Date & Time Analyzed: 09/10/08; 11:46 AM

Analyst: SK

Method: IDEXX Colilert with Quanti-Tray 2000

Reference: IDEXX Colilert Instruction Sheet

Note: Analyst had trouble getting the Quanti-Tray/2000 to go through sealer. It had to be tried four times before it would go all the way through. The small wells were repeatedly heated during this process.

Certified by:

Lisa Workman
Laboratory Supervisor

REI Consultants, Inc.
Analytical Results

Date: 17-Sep-08

CLIENT: WESTERN VA WATER WWTP

WorkOrder: 0809739

Client Sample ID: SW 007 GRAB

Lab ID: 0809739-01A

Project: STORM WATER 007

Collection Date: 9/10/2008 11:19:00 AM

Site ID:
Matrix: SURFACE WATER

Analyses	Result	Units	Qual	PQL	MCL	Prep Date	Date Analyzed
METALS BY ICP			E200.7			Analyst: BM	
Nickel	ND	mg/L		0.0050	NA	09/11/08 8:26 AM	09/11/08 6:56 PM
Selenium	ND	mg/L		0.0200	NA	09/11/08 8:25 AM	09/11/08 6:56 PM
MERCURY, TOTAL			E245.1			Analyst: CGW	
Mercury	ND	mg/L		0.0010	NA	09/12/08 10:27 AM	09/16/08 10:23 AM
HEXAVALENT CHROMIUM, DISSOLVED			SM3500-CR D			Analyst: CGW	
Chromium, Hexavalent	ND	mg/L		0.010	NA		09/11/08 8:36 AM
BOD, 5 DAY, 20°C			SM5210 B			Analyst: JaR	
Biochemical Oxygen Demand	29	mg/L		2	NA	09/11/08 8:50 AM	09/16/08 7:48 AM
CHEMICAL OXYGEN DEMAND			E410.4			Analyst: DSA	
Chemical Oxygen Demand	30	mg/L		10	NA		09/12/08 4:10 PM
CYANIDE			E335.4			Analyst: BA	
Cyanide, Total	ND	mg/L		0.020	NA		09/12/08 2:00 PM
ANIONS BY ION CHROMATOGRAPHY			SM4110B			Analyst: JJ	
Nitrogen, Nitrate-Nitrite	1.02	mg/L		0.10	NA		09/12/08 2:33 AM
PHOSPHORUS			SM4500-P BE			Analyst: GV	
Phosphorus, Total	0.40	mg/L		0.05	NA		09/17/08 1:00 PM
TOTAL KJELDAHL NITROGEN (TKN)			SM4500-NORGC			Analyst: JL	
Nitrogen, Kjeldahl, Total	1.4	mg/L		1.0	NA		09/15/08 7:00 AM
OIL AND GREASE			E1664			Analyst: JL	
Oil & Grease	ND	mg/L		5.0	NA		09/15/08 8:30 AM
TOTAL SUSPENDED SOLIDS			SM2540 D			Analyst: GV	
Total Suspended Solids	16	mg/L		1	NA		09/11/08 8:50 AM

Key: MCL Maximum Contaminant Level

MDL Minimum Detection Limit

NA Not Applicable

ND Not Detected at the PQL or MDL

PQL Practical Quantitation Limit

TIC Tentatively Identified Compound, Estimated Concentration

Qualifiers: B Analyte detected in the associated Method Blank

E Estimated Value above quantitation range

H Holding times for preparation or analysis exceeded

S Spike/Surrogate Recovery outside accepted recovery limit

* Value exceeds Maximum Contaminant Level

Page 2 of 3

REI Consultants, Inc.
Analytical Results

Date: 17-Sep-08

CLIENT: WESTERN VA WATER WWTP

WorkOrder: 0809739

Client Sample ID: SW 007 COMP

Lab ID: 0809739-02A

Project: STORM WATER 007

Collection Date: 9/10/2008 3:10:00 PM

Site ID:
Matrix: SURFACE WATER

Analyses	Result	Units	Qual	PQL	MCL	Prep Date	Date Analyzed
METALS BY ICP			E200.7			Analyst: BM	
Nickel	ND	mg/L		0.0050	NA	09/12/08 9:53 AM	09/15/08 4:47 PM
Selenium	ND	mg/L		0.0200	NA	09/12/08 9:53 AM	09/15/08 4:47 PM
MERCURY, TOTAL			E245.1			Analyst: CGW	
Mercury	ND	mg/L		0.0010	NA	09/12/08 10:27 AM	09/16/08 10:24 AM
HEXAVALENT CHROMIUM, DISSOLVED			SM3500-CR D			Analyst: JD	
Chromium, Hexavalent	ND	mg/L		0.010	NA	09/12/08 9:53 AM	09/11/08 4:34 PM
BOD, 5 DAY, 20°C			SM5210 B			Analyst: JaR	
Biochemical Oxygen Demand	4	mg/L		2	NA	09/12/08 12:46 PM	09/17/08 9:36 AM
CHEMICAL OXYGEN DEMAND			E410.4			Analyst: DSA	
Chemical Oxygen Demand	28	mg/L		10	NA		09/12/08 4:10 PM
ANIONS BY ION CHROMATOGRAPHY			SM4110B			Analyst: JJ	
Nitrogen, Nitrate-Nitrite	0.76	mg/L		0.10	NA		09/13/08 3:18 AM
PHOSPHORUS			SM4500-P BE			Analyst: GV	
Phosphorus, Total	0.32	mg/L		0.05	NA		09/17/08 1:00 PM
TOTAL KJELDAHL NITROGEN (TKN)			SM4500-NORGC			Analyst: JL	
Nitrogen, Kjeldahl, Total	ND	mg/L		1.0	NA		09/15/08 7:00 AM
TOTAL SUSPENDED SOLIDS			SM2540 D			Analyst: GV	
Total Suspended Solids	18	mg/L		1	NA		09/12/08 8:20 AM

Key: MCL Maximum Contaminant Level
 MDL Minimum Detection Limit
 NA Not Applicable
 ND Not Detected at the PQL or MDL
 PQL Practical Quantitation Limit
 TIC Tentatively Identified Compound, Estimated Concentration

Qualifiers: B Analyte detected in the associated Method Blank
 E Estimated Value above quantitation range
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate Recovery outside accepted recovery limit
 * Value exceeds Maximum Contaminant Level



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Website: www.reiclabs.com

Improving the environment, one client at a time...

Report Narrative

Project Manager:: Joy Mullins

WO#: 0809739

Date: 9/17/2008

CLIENT: WESTERN VA WATER WWTP

Project: STORM WATER 007

All analyses were performed using documented laboratory SOPs that incorporate appropriate quality control procedures as described in the applicable methods. REI Consultants, Inc. (REIC) technical managers have verified compliance of reported results with the REIC's Quality Program and SOPs, except as noted in this case narrative. Any deviation from compliance is explained below and/or identified within the body of this report by a qualifier footnote which is defined at the bottom of each page.

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If you have any questions please contact the project manager whose name is listed above.



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September 17, 2008

JANIS RICHARDSON
WESTERN VA WATER WWTP
1540 UNDERHILL AV
ROANOKE VA 24014

TEL: (540) 853-1517

FAX (540) 853-1307

RE: STORM WATER 007

Order No.: 0809739

Dear JANIS RICHARDSON:

REI Consultants, Inc. received 2 sample(s) on 9/10/2008 for the analyses presented in the following report.

Please note two changes you may see on your report.

- Results for "Dissolved" parameters will be shown under a separate sample ID, rather than as a separate analysis under the same sample ID. The sample ID for "Dissolved" parameters will include "Field Filtered" or "Lab Filtered", as appropriate.
- Metals results will no longer be identified as "Total" or "Total Recoverable". The methods have not been changed, only their appearance on the report.

If you have any questions regarding these results, please do not hesitate to call.

Sincerely,

Joy Mullins

Project Manager





Improving the environment, one client at a time...

225 Industrial Park Drive
Beaver, WV 25813
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FAX: 304.255.2572
Website: www.reiclabs.com

June 05, 2008

JANIS RICHARDSON
WESTERN VA WATER WWTP
1502 BROWNLEE AV SE
ROANOKE VA 24014

TEL: (540) 853-1517

FAX (540) 853-1307

RE: STORMWATER 009

Order No.: 0805H84

Dear JANIS RICHARDSON:

REI Consultants, Inc. received 2 sample(s) on 5/29/2008 for the analyses presented in the following report.

Please note two changes you may see on your report.

- Results for "Dissolved" parameters will be shown under a separate sample ID, rather than as a separate analysis under the same sample ID. The sample ID for "Dissolved" parameters will include "Field Filtered" or "Lab Filtered", as appropriate.
- Metals results will no longer be identified as "Total" or "Total Recoverable". The methods have not been changed, only their appearance on the report.

If you have any questions regarding these results, please do not hesitate to call.

Sincerely,

Joy Mullins

Project Manager





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FAX: 304.255.2572
Website: www.reiclabs.com

Improving the environment, one client at a time...

Report Narrative

Project Manager: Joy Mullins

WO#: 0805H84
Date: 6/5/2008

CLIENT: WESTERN VA WATER WWTP
Project: STORMWATER 009

All analyses were performed using documented laboratory SOPs that incorporate appropriate quality control procedures as described in the applicable methods. REI Consultants, Inc. (REIC) technical managers have verified compliance of reported results with the REIC's Quality Program and SOPs, except as noted in this case narrative. Any deviation from compliance is explained below and/or identified within the body of this report by a qualifier footnote which is defined at the bottom of each page.

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All sample results are reported on an "as-received" basis unless otherwise noted.

Results reported for sums of individual parameters, such as Total Trihalomethanes (TTHM) and Total Haloacetic Acids (HAA5), may vary slightly from the sum of the individual parameter results. This apparent anomaly is caused by rounding individual results and summations at reporting, as required by EPA.

Following standard laboratory protocol, sample preservation, such as pH, is verified at time of extraction or analysis based on client requested parameters. Improper preservation is noted on the analytical bench sheet, extraction log, or preservation log and client is notified by close of following business day. All results are reported using preservation compliant samples unless otherwise noted in the analytical report.

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REI Consultants, Inc.

Analytical Results

Date: 05-Jun-08

CLIENT: WESTERN VA WATER WWTP
 Client Sample ID: SW 009 GRAB
 Project: STORMWATER 009
 Site ID:

WorkOrder: 0805H84
 Lab ID: 0805H84-01A
 Collection Date: 5/28/2008 1:57:00 PM
 Matrix: STORMWATER

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
METALS BY ICP-MS			E200.8			Analyst: DBB
Nickel	ND	mg/L	NA		0.0100	6/2/2008 10:51:21 AM
Selenium	ND	mg/L	NA		0.0050	6/2/2008 10:51:21 AM
MERCURY, TOTAL			E245.1			Analyst: DL
Mercury	ND	mg/L	NA		0.0010	5/30/2008 1:38:00 PM
HEXAVALENT CHROMIUM, DISSOLVED			SM3500-CR D			Analyst: CHW
Chromium, Hexavalent	ND	mg/L	NA		0.010	5/29/2008 11:41:00 AM
M-COLI BLUE24			E10029			Analyst: KK
E-Coli	> 32000	col/100mL	NA		1	5/29/2008 4:40:00 PM
BOD, 5 DAY, 20°C			SM5210 B			Analyst: BS
Biochemical Oxygen Demand	ND	mg/L	NA		2	6/3/2008 1:02:00 PM
CHEMICAL OXYGEN DEMAND			E410.4			Analyst: DSA
Chemical Oxygen Demand	73	mg/L	NA		10	5/30/2008 12:40:00 PM
CYANIDE			E335.4			Analyst: BA
Cyanide, Total	ND	mg/L	NA		0.020	6/2/2008 12:10:00 PM
ANIONS BY ION CHROMATOGRAPHY			SM4110B			Analyst: SB
Nitrogen, Nitrate-Nitrite	1.39	mg/L	NA		0.10	6/2/2008 8:22:00 PM
PHOSPHORUS			SM4500-P BE			Analyst: SB
Phosphorus, Total	0.44	mg/L	NA		0.05	6/3/2008 9:15:00 AM
TOTAL KJELDAHL NITROGEN (TKN)			SM4500-NORGC			Analyst: JL
Nitrogen, Kjeldahl, Total	2.7	mg/L	NA		1.0	6/3/2008 7:30:00 AM
OIL AND GREASE			E1664			Analyst: JL
Oil & Grease	ND	mg/L	NA		5.0	6/4/2008 9:30:00 AM
TOTAL SUSPENDED SOLIDS			SM2540 D			Analyst: GV
Total Suspended Solids	13	mg/L	NA		1	5/30/2008 8:00:00 AM

Key: MCL Maximum Contaminant Level
 MDL Minimum Detection Limit
 NA Not Applicable
 ND Not Detected at the PQL or MDL
 PQL Practical Quantitation Limit
 TIC Tentatively Identified Compound, Estimated Concentration

B Analyte detected in the associated Method Blank
 E Estimated Value above quantitation range
 H Holding times for preparation or analysis exceeded
 S Spike/Surrogate Recovery outside accepted recovery limits
 * Value exceeds Maximum Contaminant Level

REI Consultants, Inc.

Analytical Results

Date: 05-Jun-08

CLIENT: WESTERN VA WATER WWTP
Client Sample ID: SW 009 COMP
Project: STORMWATER 009
Site ID:

WorkOrder: 0805H84
Lab ID: 0805H84-02A
Collection Date: 5/28/2008 5:00:00 PM
Matrix: STORMWATER

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
METALS BY ICP-MS			E200.8			Analyst: DBB
Nickel	ND	mg/L		NA	0.0100	6/2/2008 10:57:11 AM
Selenium	ND	mg/L		NA	0.0050	6/2/2008 10:57:11 AM
MERCURY, TOTAL			E245.1			Analyst: DL
Mercury	ND	mg/L		NA	0.0010	5/30/2008 1:40:00 PM
HEXAVALENT CHROMIUM, DISSOLVED			SM3500-CR D			Analyst: CHW
Chromium, Hexavalent	ND	mg/L	H	NA	0.010	5/29/2008 4:52:00 PM
BOD, 5 DAY, 20°C			SM5210 B			Analyst: BS
Biochemical Oxygen Demand	ND	mg/L		NA	2	6/3/2008 1:04:00 PM
CHEMICAL OXYGEN DEMAND			E410.4			Analyst: DSA
Chemical Oxygen Demand	56	mg/L		NA	10	5/30/2008 12:40:00 PM
ANIONS BY ION CHROMATOGRAPHY			SM4110B			Analyst: SB
Nitrogen, Nitrate-Nitrite	0.57	mg/L		NA	0.10	6/2/2008 10:10:00 PM
PHOSPHORUS			SM4500-P BE			Analyst: SB
Phosphorus, Total	0.34	mg/L		NA	0.05	6/3/2008 9:15:00 AM
TOTAL KJELDAHL NITROGEN (TKN)			SM4500-NORGC			Analyst: JL
Nitrogen, Kjeldahl, Total	2.0	mg/L		NA	1.0	6/3/2008 7:30:00 AM
TOTAL SUSPENDED SOLIDS			SM2540 D			Analyst: GV
Total Suspended Solids	12	mg/L		NA	1	5/30/2008 8:00:00 AM

Key:	MCL	Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
	MDL	Minimum Detection Limit	E	Estimated Value above quantitation range
	NA	Not Applicable	H	Holding times for preparation or analysis exceeded
	ND	Not Detected at the PQL or MDL	S	Spike/Surrogate Recovery outside accepted recovery limits
	PQL	Practical Quantitation Limit	*	Value exceeds Maximum Contaminant Level
	TIC	Tentatively Identified Compound, Estimated Concentration		



REI Consultants, Inc.
225 Industrial Park Rd.
P.O. Box 286, Beaver, WV 25813
Phone: 304-255-2500 or 800-998-0105
FAX: 304-255-2572
e-mail: rlabbs@reicons.com

CLIENT: WVU CHAIN OF CUSTODY RECORD, NO. 221035
ADDRESS: 1502 Browntree Ave.
CITY/STATE/ZIP: Raabe, Va 24014
BILL TO: Abeve
CITY/STATE/ZIP: _____
PURCHASE ORDER # _____
QUOTE # _____
CONTACT PERSON: Richardson
TELEPHONE #: _____
FAX #: _____
E-MAIL ADDRESS: _____
SITE ID & STATE: _____
PROJECT ID: Stadium water 009
SAMPLER: _____

SAMPLE LOG AND ANALYSIS REQUEST	TURNAROUND TIME REQUIREMENTS REGULAR: <input checked="" type="checkbox"/> 5-Day RUSH: <input type="checkbox"/> 3-Day <input type="checkbox"/> 2-Day <input type="checkbox"/> 1-Day	NO. & TYPE OF CONTAINERS	SAMPLING DATE / TIME	MATRIX	SAMPLE COLL. / GRMS	PRESERVATIVE CODES										COMMENTS				
						0 No Preservative	1 Hydrochloric Acid	2 Nitric Acid	3 Sulfuric Acid	4 Sodium Thiosulfate	5 Sodium Hydroxide	6 Zinc Acetate	7 EDTA	8	9		10	11		
SU0005	5-P	1-P	5-28-03	SU	Comp.	X														
SU0009	1-P	1-P		SU	Comp.		X													
SU0009	1-P	1-P		SU	Comp.			X												
SU0009	1-P	1-P		SU	Comp.				X											
SU0009	1-P	1-P		SU	Comp.					X										
SU0009	1-P	1-P		SU	Comp.						X									
SU0009	1-P	1-P		SU	Comp.							X								
SU0009	1-P	1-P		SU	Comp.								X							
SU0009	1-P	1-P		SU	Comp.									X						
SU0009	1-P	1-P		SU	Comp.										X					

Prepared by: Richardson Date: 5-28-03
Reviewed by: Richardson Date: 5-28-03
In duplicate per (signature) _____
Inspected by (signature) _____
Tested by (signature) _____
FAX Results ☐ Email Results ☐

Western Virginia Water Authority

Water Pollution Control Plant
Storm Water Sample Collection Notes

Date of last rain event (0.1" or greater): 5.24.08 Hours since last rain event (0.1" or greater):
Date: 5-28-08 Storm Start Time: 8:30 Storm End Time: 3:30 Quantity of Rain (inches): .3
Total Discharge Volume: 4,719 gallons Maximum Flow Rate: 33 gallons per minute

OUTFALL 009:

Grab Sample: Time Collected: 1:57

Sampler's Signature: Cathie S. Holland

Temperature: 68.2°F Time of Analysis:

Analyst's Signature: Cathie S. Holland

pH: 7.68 S.U. Time of Analysis:

Analyst's Signature: Cathie S. Holland

Tot. Res. Ch₂: 0.15mg/L Time of Analysis:

Analyst's Signature: Cathie S. Holland

Flow-weighted Composite Sample:

Time: <u>2:37 p.m.</u>	Level: <u>1"</u>	Flow: _____	Vol. of Subsample: <u>1L</u>
Time: <u>2:52 p.m.</u>	Level: <u>1"</u>	Flow: _____	Vol. of Subsample: <u>1L</u>
Time: <u>3:07 p.m.</u>	Level: <u>1"</u>	Flow: _____	Vol. of Subsample: <u>1L</u>
Time: <u>3:22 p.m.</u>	Level: <u>1"</u>	Flow: _____	Vol. of Subsample: <u>1L</u>
Time: <u>3:37</u>	Level: <u>1"</u>	Flow: _____	Vol. of Subsample: <u>1L</u>
Time: <u>3:52</u>	Level: <u>1"</u>	Flow: _____	Vol. of Subsample: <u>1L</u>
Time: <u>4:07</u>	Level: <u>1"</u>	Flow: _____	Vol. of Subsample: <u>1L</u>
Time: <u>4:22</u>	Level: <u>1"</u>	Flow: _____	Vol. of Subsample: <u>1L</u>
Time: <u>4:37</u>	Level: <u>1/2"</u>	Flow: _____	Vol. of Subsample: <u>1L</u>
Time: <u>4:52</u>	Level: <u>1/2"</u>	Flow: _____	Vol. of Subsample: <u>1/2 L</u>
Time: _____	Level: _____	Flow: _____	Vol. of Subsample: <u>1/2 L</u>

Length of composite sample (time): 2:30 hrs
TOTAL VOLUME COLLECTED:

Sampler's Signature: Janis Richardson
Comments:



ATTACHMENT IV-B
MATERIALS STORAGE



WESTERN VIRGINIA WATER AUTHORITY

VPDES PERMIT VA0025020

FORM 2F ATTACHMENT IV-B

Part IV. Item B. Provide a narrative description of significant materials that are currently or in the past three years have been treated, stored or disposed in a manner to allow exposure to storm water; method of treatment, storage, or disposal; past and present materials management practices employed, in the last three years, to minimize contact by these materials with storm water runoff; materials loading and access areas; and the location, manner, and frequency in which pesticides, herbicides, soil conditioners, and fertilizers are applied.

The bulk chemicals utilized at the facility include the following: ferric chloride, sodium hypochlorite, diesel, sodium bisulfite, gasoline, and lubricants. The chemical storage areas for these chemicals have indoor storage or secondary containment and do not contact storm water. The diesel fuel is present in a regulated UST which has constant leak monitoring and is in full compliance with current regulations.

The potential exposure relates to the delivery areas for ferric chloride, ferrous chloride, sodium hypochlorite, and diesel fuel. This exposure is limited to a spill which might occur when these tanks are being filled. This is managed through spill response efforts as outlined within the storm water pollution prevention plan.

The facility does not utilize soil conditioners or fertilizers. The only pesticides utilized at the facility are for interior building spaces and pesticides which have received EPA approval as non-dangerous to aquatic life. The facility employs a state licensed pesticide applicator. Any use of pesticides is done by these employees. The employees follow all manufacturers' recommendations for the quantity and application methods applied.

The facility currently uses herbicides to kill poison oak and poison ivy in areas around the plant. The facility contracts the application of Garlon 3A to a commercial firm. The contract company also sprays Aqua Neat Aquatic Herbicide around the lagoons at the facility. The contract company follows best management practices during application of any herbicides at this facility.



ATTACHMENT IV-C
CONTROL MEASURES



WESTERN VIRGINIA WATER AUTHORITY

VPDES PERMIT VA0025020

FORM 2F ATTACHMENT IV-C

Part IV. Item C. For each outfall, provide the location and a description of existing structural and nonstructural control measures to reduce pollutants in storm water runoff; and a description of the treatment the storm water receives, including the schedule and type of maintenance for control and treatment measures and the ultimate disposal of any solid or fluid wastes other than by discharge.

Outfall 007* This includes the area east of the Primary and Secondary Clarifiers, including the area surrounding the Scum Concentrator Building, Thickened Sludge Pump Station, and four of the Anaerobic Digesters. The structural controls consist of a dedicated storm water conveyance system consisting of grass-lined ditches and pipes. Nonstructural controls consist of good housekeeping practices such as keeping the roads and conveyance systems clean, conducting periodic inspections, and keeping pervious surfaces vegetated to minimize erosion. The storm water receives no treatment.

Treatment Code: 4-A

Outfall 008 This includes an area at the north of the property located between the Flocculation Basins and Biological Aerated Filters. The structural controls consist of a dedicated storm water conveyance system (grass-lined ditches and pipes), containment around the portable waste oil tank, and drip pads at the hypochlorite and bisulfite loading stations. Nonstructural controls consist of good housekeeping practices such as keeping the roads and conveyance system clean, conducting periodic inspections, and keeping pervious surfaces vegetated to minimize erosion. The storm water receives no treatment.

Treatment Code: 4-A

Outfall 009 This includes the eastern area of the facility: the Administration Building and Maintenance Building and the associated building roof drains, and extends west to the EQ Basins. The structural controls consist of a dedicated storm water conveyance system consisting of grass-lined ditches, pipes, and an artificial wetlands area that treats some of the storm water flow from this drainage area. In addition, there is containment around the ferric chloride, polymer, and hypochlorite tanks. Nonstructural controls consist of good housekeeping practices such as keeping the roads and conveyance system clean, conducting periodic inspections, and keeping pervious surfaces vegetated to minimize erosion.

Treatment Code: Partial wetlands treatment (no code) and 4-A

* Indicates prior storm water outfall designation; designation may need to be changed to reflect slight change in location after WPCP improvements.





Improving the environment, one client at a time...

225 Industrial Park Drive
Beaver, WV 25813
TEL: 304.255.2500
FAX: 304.255.2572
Website: www.reiclabs.com

June 05, 2008

JANIS RICHARDSON
WESTERN VA WATER WWTP
1502 BROWNLEE AV SE
ROANOKE VA 24014

TEL: (540) 853-1517

FAX (540) 853-1307

RE: STORMWATER 009

Order No.: 0805H84

Dear JANIS RICHARDSON:

REI Consultants, Inc. received 2 sample(s) on 5/29/2008 for the analyses presented in the following report.

Please note two changes you may see on your report.

- Results for "Dissolved" parameters will be shown under a separate sample ID, rather than as a separate analysis under the same sample ID. The sample ID for "Dissolved" parameters will include "Field Filtered" or "Lab Filtered", as appropriate.
- Metals results will no longer be identified as "Total" or "Total Recoverable". The methods have not been changed, only their appearance on the report.

If you have any questions regarding these results, please do not hesitate to call.

Sincerely,

Joy Mullins

Project Manager





225 Industrial Park Drive
Beaver, WV 25813
TEL: 304.255.2500
FAX: 304.255.2572
Website: www.reiclabs.com

Improving the environment, one client at a time...

Report Narrative

Project Manager:: Joy Mullins

WO#: 0805H84

Date: 6/5/2008

CLIENT: WESTERN VA WATER WWTP

Project: STORMWATER 009

All analyses were performed using documented laboratory SOPs that incorporate appropriate quality control procedures as described in the applicable methods. REI Consultants, Inc. (REIC) technical managers have verified compliance of reported results with the REIC's Quality Program and SOPs, except as noted in this case narrative. Any deviation from compliance is explained below and/or identified within the body of this report by a qualifier footnote which is defined at the bottom of each page.

All samples were analyzed using the methods stated in the analytical report without modification, unless otherwise noted.

All sample results are reported on an "as-received" basis unless otherwise noted.

Results reported for sums of individual parameters, such as Total Trihalomethanes (TTHM) and Total Haloacetic Acids (HAA5), may vary slightly from the sum of the individual parameter results. This apparent anomaly is caused by rounding individual results and summations at reporting, as required by EPA.

Following standard laboratory protocol, sample preservation, such as pH, is verified at time of extraction or analysis based on client requested parameters. Improper preservation is noted on the analytical bench sheet, extraction log, or preservation log and client is notified by close of following business day. All results are reported using preservation compliant samples unless otherwise noted in the analytical report.

The test results in this report meet all NELAP requirements for parameters for which accreditations are required or available. Any exceptions are noted in this report. This report may not be reproduced, except in full, without the written approval of REIC.

In compliance with federal guidelines and standard operating procedures, all reports, including raw data and supporting quality control, will be disposed of after five years unless otherwise arranged by the client via written notification or contract requirement.

REI Consultants, Inc.

Analytical Results

Date: 05-Jun-08

CLIENT:	WESTERN VA WATER WWTP	WorkOrder:	0805H84
Client Sample ID:	SW 009 GRAB	Lab ID:	0805H84-01A
Project:	STORMWATER 009	Collection Date:	5/28/2008 1:57:00 PM
Site ID:		Matrix:	STORMWATER

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
METALS BY ICP-MS			E200.8			Analyst: DBB
Nickel	ND	mg/L		NA	0.0100	6/2/2008 10:51:21 AM
Selenium	ND	mg/L		NA	0.0050	6/2/2008 10:51:21 AM
MERCURY, TOTAL			E245.1			Analyst: DL
Mercury	ND	mg/L		NA	0.0010	5/30/2008 1:38:00 PM
HEXAVALENT CHROMIUM, DISSOLVED			SM3500-CR D			Analyst: CHW
Chromium, Hexavalent	ND	mg/L		NA	0.010	5/29/2008 11:41:00 AM
M-COLI BLUE24			E10029			Analyst: KK
E-Coli	> 32000	col/100mL		NA	1	5/29/2008 4:40:00 PM
BOD, 5 DAY, 20°C			SM5210 B			Analyst: BS
Biochemical Oxygen Demand	ND	mg/L		NA	2	6/3/2008 1:02:00 PM
CHEMICAL OXYGEN DEMAND			E410.4			Analyst: DSA
Chemical Oxygen Demand	73	mg/L		NA	10	5/30/2008 12:40:00 PM
CYANIDE			E335.4			Analyst: BA
Cyanide, Total	ND	mg/L		NA	0.020	6/2/2008 12:10:00 PM
ANIONS BY ION CHROMATOGRAPHY			SM4110B			Analyst: SB
Nitrogen, Nitrate-Nitrite	1.39	mg/L		NA	0.10	6/2/2008 8:22:00 PM
PHOSPHORUS			SM4500-P BE			Analyst: SB
Phosphorus, Total	0.44	mg/L		NA	0.05	6/3/2008 9:15:00 AM
TOTAL KJELDAHL NITROGEN (TKN)			SM4500-NORGC			Analyst: JL
Nitrogen, Kjeldahl, Total	2.7	mg/L		NA	1.0	6/3/2008 7:30:00 AM
OIL AND GREASE			E1664			Analyst: JL
Oil & Grease	ND	mg/L		NA	5.0	6/4/2008 9:30:00 AM
TOTAL SUSPENDED SOLIDS			SM2540 D			Analyst: GV
Total Suspended Solids	13	mg/L		NA	1	5/30/2008 8:00:00 AM

Key:	MCL	Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
	MDL	Minimum Detection Limit	E	Estimated Value above quantitation range
	NA	Not Applicable	H	Holding times for preparation or analysis exceeded
	ND	Not Detected at the PQL or MDL	S	Spike/Surrogate Recovery outside accepted recovery limits
	PQL	Practical Quantitation Limit	*	Value exceeds Maximum Contaminant Level
	TIC	Tentatively Identified Compound, Estimated Concentration		

REI Consultants, Inc.

Analytical Results

Date: 05-Jun-08

CLIENT: WESTERN VA WATER WWTP

WorkOrder: 0805H84

Client Sample ID: SW 009 COMP

Lab ID: 0805H84-02A

Project: STORMWATER 009

Collection Date: 5/28/2008 5:00:00 PM

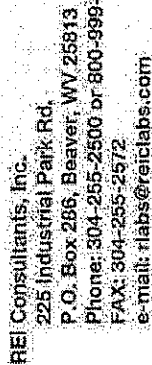
Site ID:

Matrix: STORMWATER

Analyses	Result	Units	Qual	MDL	PQL	Date Analyzed
METALS BY ICP-MS			E200.8			Analyst: DBB
Nickel	ND	mg/L		NA	0.0100	6/2/2008 10:57:11 AM
Selenium	ND	mg/L		NA	0.0050	6/2/2008 10:57:11 AM
MERCURY, TOTAL			E245.1			Analyst: DL
Mercury	ND	mg/L		NA	0.0010	5/30/2008 1:40:00 PM
HEXAVALENT CHROMIUM, DISSOLVED			SM3500-CR D			Analyst: CHW
Chromium, Hexavalent	ND	mg/L	H	NA	0.010	5/29/2008 4:52:00 PM
BOD, 5 DAY, 20°C			SM5210 B			Analyst: BS
Biochemical Oxygen Demand	ND	mg/L		NA	2	6/3/2008 1:04:00 PM
CHEMICAL OXYGEN DEMAND			E410.4			Analyst: DSA
Chemical Oxygen Demand	56	mg/L		NA	10	5/30/2008 12:40:00 PM
ANIONS BY ION CHROMATOGRAPHY			SM4110B			Analyst: SB
Nitrogen, Nitrate-Nitrite	0.57	mg/L		NA	0.10	6/2/2008 10:10:00 PM
PHOSPHORUS			SM4500-P BE			Analyst: SB
Phosphorus, Total	0.34	mg/L		NA	0.05	6/3/2008 9:15:00 AM
TOTAL KJELDAHL NITROGEN (TKN)			SM4500-NORGC			Analyst: JL
Nitrogen, Kjeldahl, Total	2.0	mg/L		NA	1.0	6/3/2008 7:30:00 AM
TOTAL SUSPENDED SOLIDS			SM2540 D			Analyst: GV
Total Suspended Solids	12	mg/L		NA	1	5/30/2008 8:00:00 AM

Key: MCL Maximum Contaminant Level
MDL Minimum Detection Limit
NA Not Applicable
ND Not Detected at the PQL or MDL
PQL Practical Quantitation Limit
TIC Tentatively Identified Compound, Estimated Concentration

B Analyte detected in the associated Method Blank
E Estimated Value above quantitation range
H Holding times for preparation or analysis exceeded
S Spike/Surrogate Recovery outside accepted recovery limits
* Value exceeds Maximum Contaminant Level



CONTACT PERSON: *W. J. ...*

ADDRESS: 1502 Brownlee Ave. TELEPHONE #: (540) 853-1517
CITY/STATE/ZIP: Roanoke, Va. 24014 FAX #:

BILL TO: _____ **E-MAIL ADDRESS:** _____

CITY/STATE/ZIP: _____ SITE ID & STATE: _____

PURCHASE ORDER # _____ PROJECT ID: 5

QUOTE # _____

PEI Consultants, Inc.

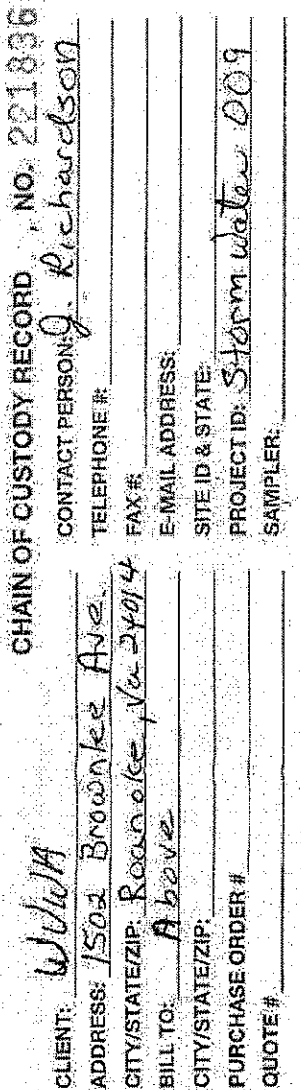
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[illegible]



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